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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,291	06/27/2003	Steven Clay Moore	AMG.4017.PAT	8734
38518	7590	06/20/2006		
SCHUBERT OSTERRIEDER & NICKELSON PLLC 6013 CANNON MTN DR, S14 AUSTIN, TX 78749			EXAMINER MEHMOOD, JENNIFER	
			ART UNIT	PAPER NUMBER
			2612	

DATE MAILED: 06/20/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/607,291

Applicant(s)

MOORE, STEVEN CLAY

Examiner

Jennifer A. Mehmood

Art Unit

2612

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on May 16, 2006 - Appeal Brief.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-40 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-40 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 October 2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☐ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

Response to Appeal Brief

1. In view of the appeal brief filed on May 16, 2006, PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below. To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 or,

(2) initiate a new appeal by filing a notice of appeal under 37 CFR 41.31 followed by an appeal brief under 37 CFR 41.37. The previously paid notice of appeal fee and appeal brief fee can be applied to the new appeal. If, however, the appeal fees set forth in 37 CFR 41.20 have been increased since they were previously paid, then appellant must pay the difference between the increased fees and the amount previously paid.

A Supervisory Patent Examiner (SPE) has approved of reopening prosecution by signing below:

Specification

2. The disclosure is objected to because of the following informalities: The last two paragraphs of the specification should be placed under the heading "Brief Description of the Drawings" since they briefly describe the drawings.

Appropriate correction is required.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, either a timing means or a clocking means that quantifies an amount of time during which the vehicle is turning must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 1 and 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. "Frequency and/or intensity" must be changed to "frequency or intensity" because the specification only describes a system where the frequency or intensity (line 1 of "Brief Summary of Invention) of the turn signal communicates that a vehicle is turning. In addition, figure 1 depicts altering a frequency with which the turn signals flash and figure 2 depicts altering an intensity with which the turn signals flash. Not one figure depicts both conditions of altering a frequency and intensity. In addition, claim 5 must be changed to either "position of a shaft and the amount of time" or "position of a shaft or the amount of time".

Claim Rejections - 35 USC § 102

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1, 2, 4-7, 14, 16, 17, 20, 22, 24, and 28 are rejected under 35 U.S.C. 102(b) as being anticipated by Middlebrooke et al. (US 4,638,295).

For claim 1, Middlebrooke discloses a system to sense when a turn signal for a vehicle is turning and indicate that the vehicle is turning by varying a frequency and/or intensity with which the turn signal blinks, signaling to other motorists that the vehicle is turning (col 1, lns 8-14), wherein the frequency and/or intensity with which the turn signal blinks is varied based upon an amount of time during which the vehicle is turning (col 2, lns 29-42). The amount of time is interpreted as a window of time during which vehicle movement or motion occurs from a first position of a vehicle to a second position of a vehicle. For example, during a first time, the vehicle is at zero time when the vehicle is stopped and the turn signal is activated while vehicle is waiting to move into a turn, but not yet turning. The vehicle is at a time greater than zero when motion detector senses vehicle movement and actual turning of the vehicle occurs.

For claim 2, Middlebrooke discloses using microcontroller(s), to take switching and sensory inputs and output a pulsing sequence to a circuit of the microcontroller(s) that drives turn signal lamps when the vehicle is turning (col 4, lns 59-67; col 5, lns 1-9; Fig. 2A, items 108, 94, 68; 110; col 6, lns 1-15).

For claim 4, Middlebrooke discloses a wheel (shaft) position sensor, or other resistive, capacitive or inductive sensor, to determine an amount to alter the frequency or intensity of the turn signal (col 4, lns 20-25 and 30-34; col 5, lns 17-26; Fig. 2A, item 52). The steering wheel column comprises both a wheel and a shaft for controlling vehicle movement. Therefore, Middlebrooke discloses a shaft position sensor.

For claim 5, Middlebrooke discloses adjusting turn signal frequency and/or intensity proportionally to a position of a shaft and/or the amount of time the vehicle has been turning (col 2, Ins 29-42).

For claim 6, Middlebrooke discloses an apparatus to communicate a turn of a vehicle, the apparatus comprising: a sensor to detect a position of a shaft of the vehicle (Fig. 2A, item 52); a control circuit to generate an output signal (col 4, Ins 62-68), wherein the output signal varies based upon the position of the wheel (col 5, Ins 17-26); and a turn signal lamp to produce a turn signal based upon the output signal (col 6, Ins 6-15).

For claim 7, Middlebrooke discloses a switch to activate the control circuit to indicate the turn upon activation of the switch (col 5, Ins 15-26; Fig. 2A, item 52).

For claim 14, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 6 as stated above.

For claims 16 and 20, 28, the claims are interpreted and rejected for the same reasons as stated in the rejection of claims 1 and 4 as stated above.

For claim 17, Middlebrooke discloses a shaft position sensor to (Fig. 2A, item 52; col 2, Ins 26-42); to determine an amount to alter the frequency or intensity of the turn signal based upon a rotational displacement of a shaft (col 5, Ins 17-26).

For claim 20, Middlebrooke discloses a method for communicating a turn of a vehicle comprising: generating an output signal with a frequency that varies based upon a position of a shaft (col 2, Ins 29-40; col 4, Ins 65-68; Fig. 2A, item 52); and

outputting a turn signal in response to application of the output signal to a turn signal lamp, wherein the turn signal flashes in relation to the frequency (col 5, Ins 15-26).

For claim 22, Middlebrooke discloses varying a current to drive a thermal flasher for the turn signal (col 1, Ins 25-32). Current varies in order to produce a flashing light.

For claim 24, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 17 as stated above. Furthermore, Middlebrooke discloses rotational position between a previous position and the position of the shaft.

8. Claims 11-13, 18, 36, 37, and 39 are rejected under 35 U.S.C. 102(b) as being anticipated by Dantoni (US 5,673,019).

For claim 11, Dantoni discloses an apparatus to communicate a turn of a vehicle, the apparatus comprising: a sensor to detect an angle of a wheel of a vehicle (col 2, Ins 26, 27, and 35-42); a control circuit to generate an output signal (col 5 Ins 32-40; Fig. 1A, item 266), wherein the output signal varies based upon the angle of the wheel; and a turn signal lamp to produce a turn signal based upon the output signal (col 3, Ins 55-67; col 4, Ins 1-4).

For claim 12, Dantoni discloses a switch to indicate the turn upon activation of the switch by the driver (col 4, Ins 30-40; Fig. 1A, item 218).

For claim 13, Dantoni discloses the control circuit comprises a microcontroller to drive the turn signal lamp (Fig. 1B, item 266 and all switches on plate 266; col 3, Ins 40-50).

For claim 18, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 11 as stated above.

For claim 36, Dantoni discloses a method for communicating a turn of a vehicle, the method comprising: sensing an angle of a wheel of the vehicle while the vehicle is moving (col 2, lns 27-38); generating an output signal based upon the angle (col 3, lns 57-67; col 4, lns 1-5); and applying the output signal to a turn signal lamp to vary an intensity of a turn signal based upon the angle (col 4, lns 12-30).

For claim 37, Dantoni discloses varying a wattage applied to the turn signal. Wattage is varied by increasing the amount of light(s) to vary intensity (col 3, lns 60-67; col 4, lns 1-4 and 27-29).

For claim 39, Dantoni discloses a method for communicating a turn of a vehicle, the method comprising: sensing a position of a shaft of the vehicle; generating an output signal for the vehicle (col 2, lns 27-42), wherein a wattage of the output signal varies based on the position of the shaft (less illumination lower wattage, more illumination higher wattage); and applying the output signal to a turn signal lamp to vary an intensity of a turn signal generated by the turn signal lamp based upon the position (col 4, lns 12-30).

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

10. Claims 8, 9, 21, 25, 26, 29, 30, 32, 33, and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Middlebrooke et al. (US 4,638,295), and further in view of Dantoni (US 5,673,019).

For claims 8 and 9, Middlebrooke discloses varying a frequency of the turn signal, but does not disclose varying a wattage to vary a frequency or intensity. However, Dantoni discloses a control circuit adapted to vary a wattage to vary an intensity of the turn signal. Wattage is varied by increasing the amount of light(s) to vary intensity (col 3, lns 60-67; col 4, lns 1-4 and 27-29). It would have been obvious to vary a wattage to vary frequency and intensity so that a driver is visually alerted to a degree of a turn, via a flashing light with variable brightness, in order to avoid a collision (col 1, lns 52-56).

For claims 21 and 26, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 8 and 9 as stated above regarding varying an intensity of a turn signal and varying wattage applied to a blinker (turn signal).

For claim 25, the claim is interpreted and rejected for the same reasons as stated in the rejection of claims 11 and 20 as stated above regarding angle of wheel.

For claim 30, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 8 as stated above regarding wattage.

For claims 29 and 32, Middlebrooke discloses all of the limitations of claim 1 except Middlebrooke discloses varying a frequency, not intensity. Dantoni, however, discloses varying an intensity of the turn signal (col 3, lns 60-67; col 4, lns 1-4 and 27-29). It would have been obvious to vary an intensity of a turn signal so that a driver is

visually alerted to a degree of a turn, via a flashing light with variable brightness, in order to avoid a collision (col 1, lns 52-56).

For claim 33, the claim is interpreted and rejected for the same reasons as stated in the rejection of claim 1.

For claim 35, the claim is interpreted and rejected for the same reasons as stated in the rejections of claims 8 and 9 as stated above (in section 9 – New Grounds of Rejection) regarding varying an intensity of a turn signal and varying a wattage of a blinker (turn signal).

11. Claim 19 is rejected under 35 U.S.C. 103(a) as being unpatentable over Dantoni (US 5,673,019), as applied to claim 18, and further in view of Middlebrooke et al. (US 4,638,295).

Dantoni discloses a circuit breaker and not a microcontroller to generate a pulsing sequence. However, Middlebrooke discloses a control circuit that comprises a microcontroller to generate a pulsing sequence to drive the turn signal lamp when the vehicle is turning (col 5, lns 59-67; col 6, lns 1-6; Fig. 2A, items 108, 68, 90-96, 110). It is obvious that microcontrollers are often used in lieu of circuit breakers for compacting circuitry to meet the requirements of smaller designs.

12. Claims 3, 10, 15, and 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Middlebrooke et al. (US 4,638,295), as applied to claim 1, and further in view of Goertler et al. (US 4,348,655).

Middlebrooke discloses a flasher relay (Fig. 2A, items 92, 94) as a pulse generator, but does not disclose a pulse generator dependent on analog voltage levels.

However, Goertler discloses pulse generators where the duty cycle and amplitude of the output signal is dependent upon analog voltage levels, to output the pulsing sequence to a circuit that drives the turn signal lamps when the vehicle is turning (col 4, lns 52-68; Fig. 1, items 40-48). It would have been obvious to one of ordinary skill in the art, at the time the invention was made to use a pulse generator dependent on analog voltage levels so that the generator is developed as a voltage controlled oscillator in order to produce an output from a specific signal.

13. Claims 27, 31, 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Middlebrooke et al. (US 4,638,295) and Dantoni (US 5,673,019), and further in view of Goertler et al. (US 4,348,655).

Claims 27 and 31 are interpreted and rejected for the same reasons as stated in the rejection of claim 3 as stated above.

Claim 34 is interpreted and rejected for the same reasons as stated in the rejection of claims 3 and 29.

14. Claims 38 and 40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Dantoni (US 5,673,019), as applied to claim 39, and further in view of Goertler et al. (US 4,348,655).

Dantoni does not disclose a pulse generator dependent on analog voltage levels. However, Goertler discloses varying a duty cycle and amplitude of the output signal (col 4, lns 52-68; Fig. 1, items 40-48). It would have been obvious to vary a duty cycle and amplitude of the voltage controlled oscillator in order to produce an output from a specific signal.

Response to Arguments

15. Applicant's arguments filed May 16, 2006 have been fully considered but they are not persuasive:

For claims 11 and 18, Appellant argues that "the specification of the subject application clearly distinguishes the detection of the position of the shaft from detection of the angle of the wheel by ..." Dantoni particularly discloses detecting an angle of a wheel in claims 11 and 18. Figure 1C depicts a microswitch attached to a steering column (col 5, Ins 32-45). The steering wheel and shaft comprise a steering column. In addition, Dantoni discloses angular positions of the wheel measured in terms of slight, medium, and sharp turn. The radial motion reflects the degree of turn (i.e. angular position and motion (col 2, Ins 26-41).

For claim 39, Appellant argues that a wattage of the output signal does not vary an intensity of a turn signal based upon position. Dantoni discloses a slight turn will illuminate one set of light bulbs in the turn signal lamp. A medium turn will illuminate two sets of bulbs in the turn signal lamp. A sharp turn will illuminate three sets of bulbs in the turn signal lamp. Therefore, Dantoni does disclose that wattage (less illumination lower wattage, more illumination higher wattage) of the output signal does vary an intensity of a turn signal lamp. For example, a visual inspection of the turn signal (output signal) lamp indicates varying degrees of brightness (changes in wattage) directly related to the degree of the turn.

For claim 36, Appellant argues that the combination of Dantoni and Middlebrooke do not disclose varying an intensity of a turn signal based upon the angle (of the wheel of the vehicle). Middlebrooke discloses varying a frequency of a turn signal based on position of the steering column (comprising the wheel and the shaft). Dantoni discloses varying an intensity of a turn signal based on position of the steering column (comprising the wheel and the shaft). In addition, Dantoni discloses the turn signal based upon the angle of the wheel (see above claims 11 and 18).

In addition, Appellant argues that the combination of Middlebrooke and Dantoni requires the use of impermissible hindsight. Both Middlebrooke and Dantoni disclose movement of the positions of the steering column to produce an output signal that visually alters a turn signal lamp – either by frequency (blinking rate) or intensity (brightness). For the above reasons, the examiner strongly disagrees with Appellant that the combination of the references require impermissible hindsight.

16. Applicant's arguments, see pages 9-11, filed May 16, 2006 (appeal brief), with respect to the rejection(s) of claim(s) 1 under 35 USC § 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Middlebrooke (see rejection to claim 1 above).

17. Applicant's arguments, see pages 14-17, filed May 16, 2006 (appeal brief), with respect to the rejection(s) of claim(s) 20 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Middlebrooke (see rejection to claim 20 above).

18. Applicant's arguments, see pages 17 and 18, filed May 16, 2006 (appeal brief), with respect to the rejection(s) of claim(s) 25 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Middlebrooke and Dantoni (see rejection to claims 11 and 20 above).

19. Applicant's arguments, see pages 20-22, filed May 16, 2006 (appeal brief), with respect to the rejection(s) of claim(s) 28 under 35 USC § 103 have been fully considered and are persuasive. Therefore, the rejection has been withdrawn.

However, upon further consideration, a new ground(s) of rejection is made in view of Middlebrooke (see rejection to claim 28 above).

Conclusion

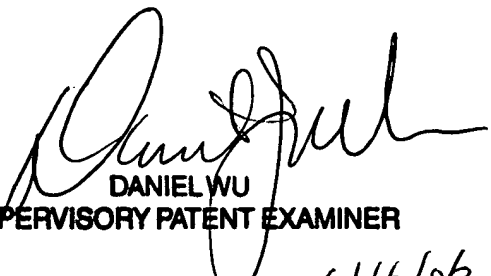
20. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer A. Mehmood whose telephone number is (571) 272.2976. The examiner can normally be reached 8:00-4:30, M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mr. Daniel Wu can be reached at (571) 272.2964. The fax phone number for the organization where this application or proceeding is assigned is (571) 273.8300 for regular and after final communications.

Any inquiry of a general nature of relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272.2600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Jennifer Mehmood
June 16, 2006


DANIEL WU
SUPERVISORY PATENT EXAMINER
6/16/06